Laboratory unit MDDLI D

Brief description of current laboratory procedures

MIDPH Bureau of Laboratory Sc	ciences
Linda Han, MD (617) 983-6201	

Division of Analytical Chemistry [3rd floor/Tower] Julianne Nassif (617) 983-6651

Chemical Terrorism Lab- Supervisor: Paul Servizio (617) 983-6653 Childhood Lead Lab- Supervisor: Alan Rubin (617) 983-6666 Drug Analysis- Amherst Supervisor: James Hanchett (413) 545-2601 Supervisor: Charles Salemi (617) 983-6629

Environmental Chemistry Lab Supervisor: Jill Clemmer (617) 983-6657

Division of Laboratory Response and Communication

Bioterrorism Response Lab Director: Cheryl Gauthier (617) 983-6266 Supervisor: Tanya Swanson

(617) 983-6664 [4th floor/Tower] Division of Microbiology

MD (617) 983-6201

Food-borne Disease Surveillance Labs [4th floor/Tower]

Supervisor: Tracy Stiles (617) 983-6619

-Dairy Lab - Supervisor: Tracy Stiles (617) 983-6619

-Enteric Lab- Supervisor: Tracy Stiles (617) 983-6619

-Food Lab- Supervisor: Tracy Stiles (617) 983-6619

-PFGE Lab- Supervisor: Tracy Stiles (617) 983-6619

HIV/Hepatitis Lab- Supervisor: Arthur Kazianis (617) 983-6372

Mycobacteriology Lab- Supervisor: Paul Elvin (617)983-6381

Reference Bacteriology Lab- Supervisor: Peter Belanger (617) 983-6267

STD Lab- Supervisor: James Holland (617) 983-6606 [4th floor/Tower]

Division of Molecular Diagnostics and Virology Director- Sandra Smole, PhD (617) 983-6966

Hennigan (617) 983-6391

Arbovirus Lab Contact: Scott Hennigan (617) 983-6391

Molecular Labs (two units) Supervisor: Scott Hennigan (617) 983-6391

Rabies Lab- Supervisor: Xingtai Wang, PhD [basement, 7th floors/Tower]

Virus Isolation- Supervisor: Raimond Konomi, PhD (617) 983-6383

Acting Director:

Drug Analysis- Boston

Director- Linda Han,

Director-

Manipulation, extraction, and testing of chemical specimens using variety of automated chromatography and spectroscopy

applications. Specimens can include body fluids for chemical analysis.

Manipulation of whole blood specimens (venous, capillary, spots) and testing for lead analysis.

Manipulation, extraction and testing of illicit drug material using variety of automated chromatography and spectroscopy applications. Specimens can include material contaminated with body fluids.

Manipulation, extraction, and testing of chemical specimens using variety of automated chromatography and spectroscopy applications. Specimens can include body fluids for chemical analysis.

Manipulation of environmental, biological and blood/body fluid specimens for identification of biological agents (BSL2 and above).

Procedures include: traditional culture and serology, and automated assay and molecular methods

Testing of products related to the dairy industry and commercial dairy products. Procedures include: traditional culture and biochemical assays.

Manipulation of fecal and body fluid specimens for identification of enteric bacterial pathogens. Procedures include: traditional culture and serology, and automated assay methods.

Manipulation of food samples for identification of enteric bacterial pathogens. Identification procedures include: traditional culture

and serology, and automated assay methods. Manipulation of bacterial pathogen isolates for definitive identification and typing. Procedures include: extraction and

electrophoresis, and molecular assays

Manipulation of blood and body fluid specimens and testing for HIV, hepatitis B and hepatitis C. Testing methods include EIA and

Western Blot assays.

Manipulation of respiratory, body fluid and tissue specimens for the identification of pathogenic Mycobacteria. Procedures include:

traditional culture, susceptibility, and serology, and molecular probe methods.

Manipulation of primary specimens (blood, body fluid and tissue specimens), sub-cultures and bacterial isolates for the identification of pathogenic bacteria. Procedures include: traditional culture, susceptibility, and serology assays.

Manipulation of blood and body fluid specimens for the identification of syphilis, chlamydia and gonorrhea, and performing bordetella pertussis serology. Procedures include: traditional RPR/VDRL serology and nucleic acid amplication test (NAAT).

Division Supervisor- Scott

[7th, 8th floors/Tower]

[4th, 7th, 8th floors/Tower]

[7th floor/Tower]

[7th floor /Tower]

[7th floor/Tower]

[4th floor/Tower]

Sorting and enumeration of mosquitoes, mosquito pool preparation, and collection of bird oral specimen swabs

Manipulation of environmental, biological, animal, and human blood/body fluid specimens for identification of biological agents

(BSL2 and above). Procedures include: RNA/DNA extraction techniques and various PCR procedures

Testing of animal brain tissue for rabies virus. Procedures include: necropsy of fresh brain tissue, tissue slide preparation and tissue

fixation, and DFA testing on tissue.

Manipulation of biological, animal, and human blood/body fluid specimens for identification of viral agents (BSL2 and above).

Procedures include: traditional isolation and culture.

Description of agents and potential agents of exposure

Chemical toxins related to terrorism incidents
Incidental exposure to blood-borne pathogens found in whole blood samples

Incidental exposure to illicit drugs or to pathogens in contaminated drug materials Heavy metals, Paralytic Shellfish Poison, Pesticides, Polychlorinated biphenyls (PCB), Seafood Toxin, Toxic chemicals

Anthrax, Brucella, Burkholderia mallei, Burkholderia pseudomallei, Coxiella burnetii, Francisella tularensis, Yersinia pestis, Ricin, and incidental exposure to other pathogens in specimens

Pathogenic bacteria associated with dairy products
Bacillus cereus, Campylobacter, Cholera, Clostridium botulinum, Clostridium perfringens, E.coli, Listeria,
Salmonella, Shigella, and incidental exposure to other pathogens in specimens
Bacillus cereus, Campylobacter, Cholera, Clostridium botulinum, Clostridium perfringens, E.coli, Listeria,
Paralytic Shellfish Poison, Salmonella, Shigella

Bacterial pathogen isolates including Listeria, Salmonella, Shigella, and Staphylococcus

HIV, hepatitis B and hepatitis C

Mycobacteria, Nocardia, and incidental exposure to other pathogens in specimens
Aeromonas, Bordetella pertussis, Corynebacterium diphtheriae, Haemophilus influenzae, Legionella, Listeria,
Neisseria gonorrhea, Neisseria meningitidis, Staphylococcus aureus, Streptococcus, and incidental exposure to
other pathogens in specimens

Chlamydia, gonnorhea, syphilis and incidental exposure to other pathogens in specimens

Mosquitoes, birds and other animals contaminated with viral and other agents. BSL-2 and BSL-3 pathogenic viral and bacterial agents

Rabies virus and other zoonotic agents contaminating the animal specimens
Arbovirus (EEE/WNV), Adenovirus, Coxsackievirus, Cytomegalovirus, Echovirus, Enterovirus, Herpes,
Influenza, Measles, Mumps, Orthopoxvirus, Parainfluenza, Poliovirus, RSV, Rubella, Smallpox, Vaccinia,
Varicella Zoster, processing of other BSL-2 and 3 virus cultures to the CDC, and incidental exposure to other
nathogens in specimens

[8th floor/Tower]

Director-

Virus Serology Lab- Supervisor: Karen Chen (617) 983-6397 Division of QA/ IT/ Lab Operations Dina Caloggero (617) 983-6601

Central Laboratory Services- Supervisor: Alan Borne (617) 983- 6605

-Glassware [2nd floor/Tower] - Supervisor: Alan Borne (617) 983- 6605 -Specimen Kits [2nd floor/Tower]- Supervisor: Alan Borne (617) 983- 6605 -Media Preparation [2nd floor/Tower] - Supervisor: Alan Borne (617) 983- 6605

-Specimen Receiving [1st floor/Tower]- Supervisor: Alan Borne (617) 983-6605

Manipulation of biological, animal, and human blood/body fluid specimens for identification of viral agents (BSL2 and above). Procedures include: traditional serology and semi-automated immunoassay

Cleaning and processing of non-disposable laboratory ware for all DPH Laboratory units. Procedures include: washing and/or sterilization of containers/vessels, issuing laboratory ware, and maintaining inventory of items.

Manufacturing of specimen collection and transport kits. Kits are used by State Lab clients to submit specimens.

Manufacturing of microbiology culture media and laboratory chemical reagents.

Point of receipt and processing of all specimens entering the State Laboratory before distribution to specific laboratory units. Procedures: area is transitioning to greater manipulation of specimens (i.e. opening and sorting specimens before distribution to laboratories)

Arbovirus (EEE/WNV), Measles, Mumps, Rubella, St Louis Encephalitis, Yellow Fever, Mycoplasma pneumoniae, processing of other BSL- 2 and 3 virus serologies to the CDC, and incidental exposure to other pathogens in specimens

Exposure to chemicals used for cleaning glassware Not applicable Chemicals and materials used in manufacturing products

Incidental exposure to pathogens during specimen processing